

## GlobalSeaweedSTAR Capacity Building Fund Completion Report

### Awardee Details

<b>Grant reference ID</b>	GSS/CBF/002
<b>Full name/title</b>	Patrick Colledge
<b>Position held</b>	Postgraduate Student
<b>Organisation</b>	Swansea University



### Details of Capacity-Building Activity

<b>Name of activity</b>	IPC 2021
<b>Date held</b>	22.03.2021 – 26.03.2021
<b>Organiser/provider</b>	International Phycological Congress / IPC2021

### Biography

Currently studying a MRes in Bioscience at Swansea University, my interests lie within microalgal biotechnology. At Swansea University, I am researching the genetic expression related to fatty acid synthesis within cyanobacteria (*Chlorogloeopsis fritschii*) under UV and far-red light conditions. This research is scarce within the microalgal community and can provide a greater understanding of the biological process that occurs when cyanobacteria is exposed to the latter conditions.

The aims within my research are to identify new methods and techniques for industrial production of microalgal products, focusing on high value compounds whilst improving biomass productivity. This has shaped my research to focus on specific groups of compounds and testing experimental conditions.

An example is my undergraduate project that focused on the effect of pigment composition when *Scenedesmus obliquus* is cultivated on anaerobic digestate. Therefore, my research so far has lead myself to conducting pigment and transcriptomic analysis by HPLC and bioinformatic tools, respectively.

### **Report on Capacity-Building Activity**

This was a conference where I attended different symposiums about algal research and interacted with keynote speakers about their work.

This opportunity allowed myself to improve my knowledge on microalgal research and network with the speakers present.

I particularly enjoyed the interaction with other members which was carried out quite well considering this was an online conference.